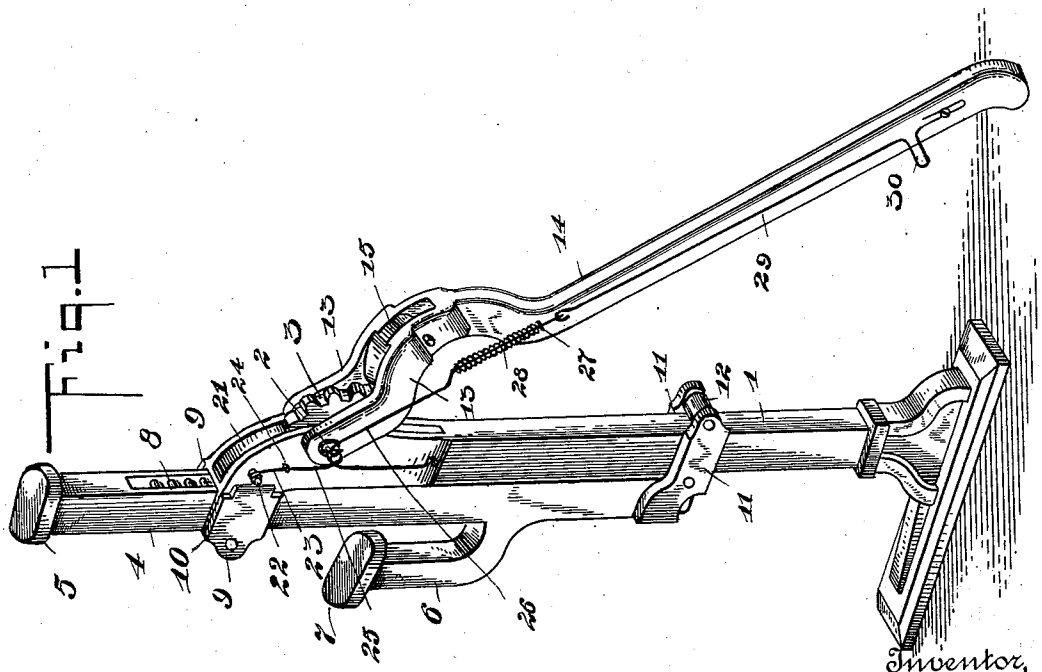
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I. L. THOMPSON

WAGON JACK.

No. 590,602. Patented Sept. 28, 1897.

Fig. 1.



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Fig 2

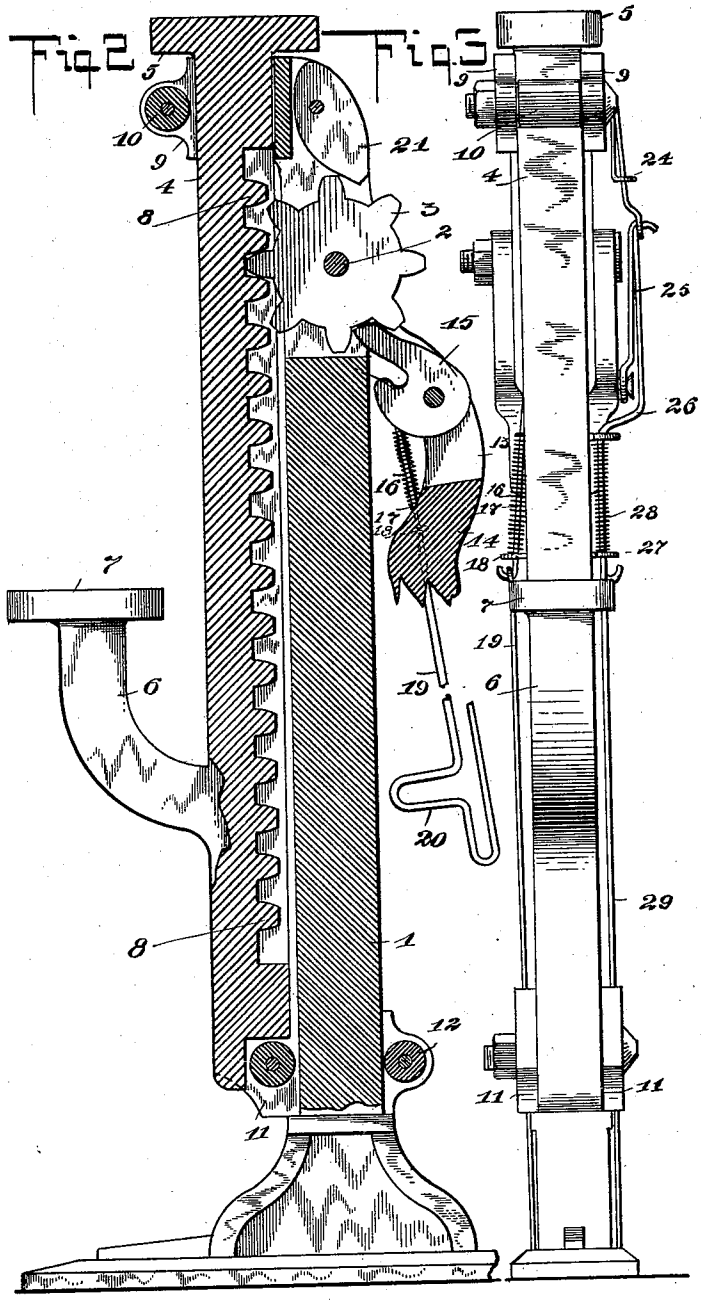


Fig 3

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UNITED STATES PATENT OFFICE.

ISOM L. THOMPSON, OF DAYTON, ILLINOIS.

WAGON-JACK.

SPECIFICATION forming part of Letters Patent No. 590,602, dated September 28, 1897.

Application filed July 15, 1896. Serial No. 599,307. (No model.)

To all whom it may concern:

Be it known that I, ISOM L. THOMPSON, a citizen of the United States, residing at Dayton, in the county of La Salle and State of Illinois, have invented certain new and useful Improvements in Wagon-Jacks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in wagon-jacks, the object of the same being to provide a device for elevating carriages, wagons, and the like which is simple in construction, effective in operation, durable, and cheap.

The invention consists in the construction, combination, and arrangement of parts, as will be hereinafter more fully described and claimed.

In the drawings forming a part of this specification, Figure 1 represents a perspective view of my improved jack in operative position. Fig. 2 is a vertical longitudinal section through the same. Fig. 3 is a rear elevation of the same.

Like reference-numerals indicate like parts in the different views.

My improved jack is made up of an upright or standard 1, the upper end of which is recessed or slotted, as clearly shown, in which recess is loosely mounted upon a transverse shaft 2 a cog-wheel 3, the edges of said cog-wheel projecting slightly beyond the inner and outer edges of said standard or upright.

The numeral 4 represents a vertically-reciprocable lifting-bar, the same having a head 5 thereon and a laterally and upwardly extending arm 6, provided with a similar head 7. The said bar is also provided with a series of notches or teeth 8 8 along its inner edge, with which teeth the cog-wheel 3 is adapted to engage. Ears 9 9 extend outwardly from the upper end of the upright or standard 1, the same being connected at their ends by a shaft upon which an antifriction-roller 10 is mounted. Similar arms or ears 11 11 extend in the opposite direction from the lower end of the bar 4, embracing the standard 1, and are connected at their outer ends by a rod upon which is mounted an antifriction-roller 12. The parts 9, 10, 11, and 12 serve as guides for the lifting-bar 4, and the rollers permit an easy sliding movement of said bar.

It is obvious that in place of the arms with the antifriction-rollers at their outer ends I may substitute ordinary collars or clips for the same purpose.

In the manufacture of my device I propose to use the rollers 10 and 12 only upon devices which are designed for heavy work.

Fulcrumed upon the shaft 2 and embracing the standard 1 are the bifurcated arms 13 13 of an operating-lever 14. Said lever 14 has pivoted to it between its arms 13 a dog 15, whose projecting end is adapted to engage the teeth of the cog-wheel 3, the same being held in this engagement by means of a coil-spring 16, surrounding a rod 17, pivoted to an arm on said dog and passing through a loop or staple 18 upon the main body part of the operating-lever 14.

Attached to the lower end of the rod 17 is a release-rod 19, formed with a handle or finger-piece 20 thereon and mounted to slide along the side of the lever 14. By this means the dog 15 may be released from engagement with the cog-wheel 3 by simply drawing down upon the release-rod 19. A similar dog 21 is mounted in the upper end of the standard 1 and normally engages the teeth of the cog-wheel 3 to prevent backward movement thereof. The shaft 22, upon which the dog 21 is mounted, has an arm 23 thereon with a loop or eye 24 in its outer end, through which passes a rod or wire 25, pivotally connected at one end to the standard 1. The rod 25 is in turn connected to a rod 26, which leads downwardly to the operating-lever 14 and passes through a loop or staple 27 upon the side of said lever. Said rod 26 is surrounded by a coil-spring 28, which tends to normally urge said rod upwardly, pressing the rod 25 inwardly and holding the dog 21 in close contact with the teeth of the cog-wheel 3.

Connected to the lower end of the rod 26 is a second release rod or bar 29, formed with a projecting handle or thumb-piece 30 at a point near its lower end and moving in suitable guides upon the opposite sides of the lever 14 to that upon which the release-rod 19 is secured.

From the foregoing description it is thought

that the operation of my device will be readily understood. Briefly stated, however, it is as follows: The jack is placed under the axle of the wagon, the same resting either upon the head 5 or 7 on the lifting-bar 4. The operating-lever 14 is then elevated so that the dog 15 is brought into engagement with the next tooth higher on the wheel 3. The said lever is then pressed downwardly, rotating the cog-wheel 3, which through its engagement with the teeth 8 on the lifting-bar 4 raises said lifting-bar. If upon one operation the desired elevation has not been reached, it is merely necessary to repeat the operation just described, which may be done any number of times until the lifting-bar 5 has reached the limit of its upward movement. As the cog-wheel 3 is turned to raise the lifting-bar 4 it is prevented from backward movement by the engagement of the dog 21 with the teeth thereon. When it is desired to lower the lifting-rod 4, it may be done by pressing upon the handles 20 and 30 of the release-rods 19 and 29, respectively, which action will throw the pawls 15 and 21 out of the line of movement of the cog-wheel 3 and permit said lifting-bar to fall suddenly by gravity. If, however, it be desired to lower the lifting-bar 4 slowly, it may be done by a step-by-step movement by first releasing the dog 15 through the release-rod 19, permitting a partial backward rotation of the cog-wheel 3, afterward permitting said dog 15 to return to its normal position and then release the dog 21 through the release-rod 29. This may be repeated until the said bar has been rotated to the desired level.

While I have described my invention as being especially adapted for use as a lifting-jack for wagons and the like, it is also capable of being used for drawing fence-posts from the ground, an immense leverage and consequent power being obtained from the operating-lever 14, and the step-by-step movement provided by the coöperation of the cog-wheel 3, the lifting-bar 4, and the dogs 15 and 21 being especially adapted for this class of work. The means by which the connections are made with the fence-post are obvious from what has preceded, and a further detailed description thereof is not deemed necessary.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a device of the character set forth, the combination with an upright or standard, of a vertical reciprocable lifting-bar acting in engagement therewith having teeth along one edge thereof, a cog-wheel mounted in said upright adapted to engage the teeth on said lifting-bar, an operating-lever fulcrumed in said upright, a spring-actuated dog thereon which is normally held in engagement with the teeth of said cog-wheel, a dog for preventing the backward movement of said cog-wheel, a release-rod having a handle or finger-piece formed thereon integral with the main portion of said rod slidingly mounted along one side of said operating-lever and attached directly to said pawl, and a second release-lever having a handle or finger-piece formed integral therewith, the said release-lever being slidingly mounted upon the opposite side of said operating-lever to that on which the other release-lever is mounted and connected directly to the dog for preventing the backward movement of said cog-wheel, substantially as and for the purpose described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ISOM L. THOMPSON.

Witnesses:
FREEMAN WHEELER,
FOSTER V. THOMPSON.